WHAT IS CLAIMED IS

1. A fixing unit to thermally fix a toner on a recording medium, comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

a temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, having a state which generates no heat in response to power supplied from a first power supply even during an operation of the fixing unit,

remaining second heaters, of the plurality of heaters, being capable of constantly generating heat in response to power supplied from a second power supply during the operation of the fixing unit,

one of the second heaters closest to the temperature detecting position is the same distance from the temperature detecting position as or is closer to the temperature detecting position than a first heater which is closest to the temperature detecting position.

2. The fixing unit as claimed in claim 1, wherein the first power supply comprises a battery.

3. The fixing unit as claimed in claim 2, wherein the battery comprises a capacitor.

4. The fixing unit as claimed in claim 1, wherein the first power supply comprises a battery, and the second power supply comprises a commercial A.C. power supply.

5. The fixing unit as claimed in claim 1, wherein the fixing member comprises a fixing roller, and the first heater and the second heater are alternately arranged along a circumferential direction of the fixing roller.

6. A fixing unit to thermally fix a toner on a recording medium, comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

a temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, receiving the power from a first power supply,

remaining second heaters, of the plurality of heaters, receiving the power from a second power supply

which is different from the first power supply,

one of the second heaters closest to the temperature detecting position is the same distance from the temperature detecting position as or is closer to the temperature detecting position than a first heater which is closest to the temperature detecting position.

7. The fixing unit as claimed in claim 6, wherein the first power supply comprises a battery.

8. The fixing unit as claimed in claim 6, wherein the first power supply comprises a capacitor.

9. The fixing unit as claimed in claim 6, wherein the first power supply comprises a battery, and the second power supply comprises a commercial A.C.

power supply.

10. The fixing unit as claimed in claim 6, wherein the fixing member comprises a fixing roller, and the first heater and the second heater are alternately arranged symmetrically along a circumferential direction of the fixing roller relative to a center of the fixing roller.

11. The fixing unit as claimed in claim 6, wherein the fixing member comprises a fixing roller, and at least one first heater and a plurality of second heaters are arranged symmetrically along a circumferential direction of the fixing roller relative to a center of the fixing roller.

12. The fixing unit as claimed in claim 11, wherein another first heater is arranged at the center of the fixing roller.

13. The fixing unit as claimed in claim 11, wherein another second heater is arranged at the center of the fixing roller.

14. The fixing unit as claimed in claim 6, further comprising:

a pressing member configured to press against the fixing member and to receive the recording medium transported between the pressing member and the fixing member.

15. An image forming apparatus adapted to

form an image on a recording medium by an electrophotography technique, comprising:

an image forming unit configured to form a toner image on a recording medium; and

a fixing unit configured to thermally fix the toner image on the recording medium,

said fixing unit comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

a temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, having a state which generates no heat in response to power supplied from a first power supply even during an operation of the fixing unit,

remaining second heaters, of the plurality of heaters, being capable of constantly generating heat in response to power supplied from a second power supply during the operation of the fixing unit,

one of the second heaters closest to the temperature detecting position is the same distance from the temperature detecting position as or is closer to the temperature detecting position than a first heater which is closest to the temperature detecting position.

16. An image forming apparatus adapted to form an image on a recording medium by an electrophotography technique, comprising:

an image forming unit configured to form a toner image on a recording medium; and

a fixing unit configured to thermally fix the toner image on the recording medium,

said fixing unit comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

a temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by

the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, receiving the power from a first power supply,

remaining second heaters, of the plurality of heaters, receiving the power from a second power supply which is different from the first power supply,

one of the second heaters closest to the temperature detecting position is the same distance from the temperature detecting position as or is closer to the temperature detecting position than a first heater which is closest to the temperature detecting position.

17. A fixing unit to thermally fix a toner on a recording medium, comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

at least one temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power

controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery,

remaining second heaters, of the plurality of heaters, being capable receiving the power from an external power supply,

a temperature distribution of the surface temperature when the first heater is ON and a temperature distribution of the surface temperature when the first heater is OFF having a difference which is smaller than a predetermined value at the temperature detecting position.

18. The fixing unit as claimed in claim 17, wherein:

the fixing member comprises a fixing roller;

each of the plurality of heaters has a rod shape extending in a longitudinal direction of the fixing roller; and

at least one of the second heaters is made up of a plurality of heater parts which are aligned in the longitudinal direction and are independently controllable.

19. The fixing unit as claimed in claim 18, wherein one second heater is made up of a center heater part located only in a central portion along the longitudinal direction of the fixing roller, and another second heater is made up of a pair of end heater parts located on both sides with respect to the central portion along the longitudinal direction of the fixing roller.

20. The fixing unit as claimed in claim 19, wherein the center heater part and the pair of end heater parts partially overlap in the longitudinal direction of the fixing roller.

21. The fixing unit as claimed in claim 19, wherein a first temperature sensor is provided with respect to the center heater part and a second temperature sensor is provided with respect to one of the pair of end heaters parts, and temperature detecting positions of the first and second temperature sensors are mutually different along a circumferential direction of the fixing roller.

22. The fixing unit as claimed in claim 18, wherein the controlled power supplied to each first heater is turned ON and OFF, and the controlled power supplied to each second heater is varied in a plurality of levels.

23. The fixing unit as claimed in claim 18, wherein the temperature sensor is only provided with respect to one of symmetrically arranged heater parts of each second heater.

24. The fixing unit as claimed in claim 18, wherein each heater part is configured to generate different amounts of heat in response to the same driving power at different positions along the longitudinal direction of the fixing roller.

25. A fixing unit to thermally fix a toner on a recording medium, comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

at least one temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery,

remaining second heaters, of the plurality of

heaters, being capable receiving the power from an external power supply,

a temperature distribution of the surface temperature when no first heater is provided and at least one of the second heaters is turned ON and a temperature distribution of the surface temperature when the first heater is provided and at least one of the second heaters is turned ON having a difference which is smaller than a predetermined value at the temperature detecting position.

26. The fixing unit as claimed in claim 25, wherein:

the fixing member comprises a fixing roller;

each of the plurality of heaters has a rod shape extending in a longitudinal direction of the fixing roller; and

at least one of the second heaters is made up of a plurality of heater parts which are aligned in the longitudinal direction and are independently controllable.

27. The fixing unit as claimed in claim 26, wherein one second heater is made up of a center heater part located only in a central portion along the longitudinal direction of the fixing roller, and another second heater is made up of a pair of end heater parts located on both sides with respect to the central portion along the longitudinal direction of the fixing roller.

28. The fixing unit as claimed in claim 27, wherein the center heater part and the pair of end heater parts partially overlap in the longitudinal direction of the fixing roller.

29. The fixing unit as claimed in claim 27, wherein a first temperature sensor is provided with respect to the center heater part and a second temperature sensor is provided with respect to one of the pair of end heaters parts, and temperature detecting

positions of the first and second temperature sensors are mutually different along a circumferential direction of the fixing roller.

30. The fixing unit as claimed in claim 26, wherein the controlled power supplied to each first heater is turned ON and OFF, and the controlled power supplied to each second heater is varied in a plurality of levels.

31. The fixing unit as claimed in claim 26, wherein the temperature sensor is only provided with respect to one of symmetrically arranged heater parts of each second heater.

32. The fixing unit as claimed in claim 26,

wherein each heater part is configured to generate different amounts of heat in response to the same driving power at different positions along the longitudinal direction of the fixing roller.

33. An image forming apparatus adapted to form an image on a recording medium by an electrophotography technique, comprising:

an image forming unit configured to form a toner image on a recording medium; and

a fixing unit configured to thermally fix the toner image on the recording medium,

said fixing unit comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

at least one temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature

becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery,

remaining second heaters, of the plurality of heaters, being capable receiving the power from an external power supply,

a temperature distribution of the surface temperature when the first heater is ON and a temperature distribution of the surface temperature when the first heater is OFF having a difference which is smaller than a predetermined value at the temperature detecting position.

34. An image forming apparatus adapted to form an image on a recording medium by an electrophotography technique, comprising:

an image forming unit configured to form a toner image on a recording medium; and

a fixing unit configured to thermally fix the toner image on the recording medium,

said fixing unit comprising:

a fixing member having a plurality of internal heaters, and an outer peripheral surface configured to fix the toner on the recording medium; and

at least one temperature sensor configured to detect a surface temperature of the fixing member at a temperature detecting position,

said plurality of heaters receiving power controlled based on the surface temperature detected by the temperature sensor so that the surface temperature becomes a predetermined temperature,

at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery,

remaining second heaters, of the plurality of heaters, being capable receiving the power from an external power supply,

a temperature distribution of the surface temperature when no first heater is provided and at least one of the second heaters is turned ON and a temperature distribution of the surface temperature when the first heater is provided and at least one of the second heaters is turned ON having a difference which is smaller than a predetermined value at the temperature detecting position.

35. A method of determining a temperature detecting position of a temperature sensor which is configured to detect a surface temperature of a fixing member having a plurality of internal heaters which receiving power controlled based on the surface temperature detected by the temperature sensor, at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery, remaining second heaters, of the plurality of heaters, being capable receiving the power from an external power supply, said method comprising the steps of:

obtaining a first temperature distribution of the surface temperature when the first heater and at least one second heater is ON;

obtaining a second temperature distribution of the surface temperature when the first heater is OFF and said at least one second heater is ON; and

determining the temperature detecting position of the temperature sensor to a location where a difference between the first and second temperature distributions is smaller than a predetermined value.

36. A method of determining a temperature detecting position of a temperature sensor which is configured to detect a surface temperature of a fixing member having a plurality of internal heaters which receiving power controlled based on the surface temperature detected by the temperature sensor, at least one first heater, of the plurality of heaters, being capable of receiving the power from a battery, remaining second heaters, of the plurality of heaters, being capable receiving the power from an external power supply, said method comprising the steps of:

obtaining a first temperature distribution of the surface temperature when no first heater is provided and at least one second heater is ON;

obtaining a second temperature distribution of the surface temperature when the first heater is provided and at least one second heater is ON; and

determining the temperature detecting position of the temperature sensor to a location where a difference between the first and second temperature distributions is smaller than a predetermined value.